IN THE CLAIMS

1. (currently amended) A rigid solid support, comprising:

(A) at least one T cell ~~lymphocyte~~ affecting molecule selected from the group consisting of a T cell costimulatory molecule, an adhesion molecule, a T cell growth factor, a regulatory T cell inducer molecule, and an apoptosis-inducing molecule; and

(B) at least one molecular complex that, when bound to an antigen, engages a unique clonotypic lymphocyte receptor, wherein the at least one molecular complex is selected from the group consisting of:

(1) an MHC class I molecular complex comprising at least two fusion proteins, wherein a first fusion protein comprises a first MHC class I α chain and a first immunoglobulin heavy chain comprising a variable region and wherein a second fusion protein comprises a second MHC class I α chain and a second immunoglobulin heavy chain, wherein the first and second immunoglobulin heavy chains associate to form the MHC class I molecular complex, wherein the MHC class I molecular complex comprises a first MHC class I peptide binding cleft and a second MHC class I peptide binding cleft; and

(2) an MHC class II molecular complex comprising at least four fusion proteins, wherein:

(a) two first fusion proteins comprise (i) an immunoglobulin heavy chain comprising a variable region and (ii) an extracellular domain of an MHC class IIβ chain; and

(b) two second fusion proteins comprise (i) an immunoglobulin light chain and (ii) an extracellular domain of an MHC class IIα chain,

wherein the two first and the two second fusion proteins associate to form the MHC class II molecular complex, wherein the extracellular domain of the MHC class IIβ chain of each first fusion protein and the extracellular domain of the MHC class IIα chain of each second fusion protein form an MHC class II peptide binding cleft.

2. (canceled)

3. (currently amended) The rigid solid support of claim 1 ~~2~~ which is ~~a rigid solid support, wherein the rigid solid support is a~~ an artificial particle.

4-6. (canceled)

7. (currently amended) The rigid solid support of claim 5 wherein the at least one molecular ~~antigen-presenting~~ complex is the ~~an~~ MHC class I molecular complex ~~comprising at least two fusion proteins, wherein a first fusion protein comprises a first MHC class I α chain and a first immunoglobulin heavy chain and wherein a second fusion protein comprises a second MHC class I α chain and a second immunoglobulin heavy chain, wherein the first and second immunoglobulin heavy chains associate to form the MHC class I molecular complex, wherein the MHC class I molecular complex comprises a first MHC class I peptide binding cleft and a second MHC class I peptide binding cleft~~.

8-9. (canceled)

10. (currently amended) The rigid solid support of claim 1 ~~8~~ wherein the at least one molecular ~~antigen-presenting~~ complex is the ~~an~~ MHC class II molecular complex ~~comprising at least four fusion proteins, wherein:~~

~~(a) two first fusion proteins comprise (i) an immunoglobulin heavy chain and (ii) an extracellular domain of an MHC class IIβ chain; and~~

~~(b) two second fusion proteins comprise (i) an immunoglobulin light chain and (ii) an extracellular domain of an MHC class IIα chain,~~

~~wherein the two first and the two second fusion proteins associate to form the MHC class II molecular complex, wherein the extracellular domain of the MHC class IIβ chain of each first fusion protein and the extracellular domain of the MHC class IIα chain of each second fusion protein form an MHC class II peptide binding cleft~~.

11. (canceled)

12. (currently amended) The rigid solid support of claim 1 ~~4~~ wherein the at least one molecular complex comprises an antigenic peptide ~~is bound to the at least one antigen binding cleft~~.

13. (currently amended) The rigid solid support of claim 12 wherein the antigenic peptide is selected from the group consisting of a peptide of a tumor-associated antigen, a peptide of an autoantigen, a peptide of an alloantigen, and a peptide of an infectious agent antigen.

14. (currently amended) The rigid solid support of claim 1 ~~4~~ comprising at least two molecular complexes ~~antigen presenting complexes~~.

15. (currently amended) The rigid solid support of claim 14 wherein an identical antigenic peptide ~~antigen~~ is bound to each peptide ~~antigen~~ binding cleft of the at least two molecular ~~antigen presenting~~ complexes.

16. (withdrawn) The rigid solid support of claim 14 wherein different antigenic peptides ~~antigens~~ are bound to each peptide ~~antigen~~ binding cleft of the at least two molecular ~~antigen presenting~~ complexes.

17. (withdrawn) The rigid solid support of claim 14 wherein a first molecular ~~antigen presenting~~ complex comprises at least one MHC class I peptide binding cleft and wherein a second molecular ~~antigen presenting~~ complex comprises at least one MHC class II peptide binding cleft.

18. (withdrawn) The rigid solid support of claim 17 wherein identical antigenic peptides are bound to the at least one MHC class I peptide binding cleft and the at least one MHC class II peptide binding cleft.

19. (withdrawn) The rigid solid support of claim 17 wherein different antigenic peptides are bound to the at least one MHC class I peptide binding cleft and the at least one MHC class II peptide binding cleft.

20-22. (canceled)

23. (currently amended) The rigid solid support of claim 1 **4** wherein the at least one T cell affecting molecule is a T cell costimulatory molecule.

24. (currently amended) The rigid solid support of claim 23 wherein the T cell costimulatory molecule is selected from the group consisting of CD80 (B7-1), CD86 (B7-2), B7-H3, 4-1BBL, CD27, CD30, CD134 (OX-40L), B7h (B7RP-1), CD40, LIGHT, an antibody that specifically binds to CD28, an antibody that specifically binds to HVEM, an antibody that specifically binds to CD40L, an antibody that specifically binds to OX40, and an antibody that specifically binds to 4-1BB.

25. (currently amended) The rigid solid support of claim 1 **4** wherein the at least one T cell affecting molecule is an adhesion molecule.

26. (currently amended) The rigid solid support of claim 25 wherein the adhesion molecule is selected from the group consisting of ICAM-1 and LFA-3.

27. (currently amended) The rigid solid support of claim 1 4 wherein the at least one T cell affecting molecule is a T cell growth factor.

28. (currently amended) The rigid solid support of claim 27 wherein the T cell growth factor is selected from the group consisting of a cytokine and a superantigen.

29. (currently amended) The rigid solid support of claim 28 wherein the T cell growth factor is a cytokine and the cytokine is selected from the group consisting of IL-2, IL-4, IL-7, IL-10, IL-12, IL-15, and gamma interferon.

30. (withdrawn) The rigid solid support of claim 27 wherein the T cell growth factor is selected from the group consisting of:

(A) a first molecular complex comprising at least two fusion proteins, wherein a first fusion protein comprises a first cytokine and an immunoglobulin heavy chain and wherein a second fusion protein comprises a second cytokine and a second immunoglobulin heavy chain, wherein the first and second immunoglobulin heavy chains associate to form the first molecular complex; and

(B) a second molecular complex comprising at least four fusion proteins, wherein:

(a) two first fusion proteins comprise (i) an immunoglobulin heavy chain and (ii) a first cytokine; and

(b) two second fusion proteins comprise (i) an immunoglobulin light chain and (ii) a second cytokine,

wherein the two first and the two second fusion proteins associate to form the second molecular complex.

31. (withdrawn) The rigid solid support of claim 30 wherein the T cell growth factor is the first molecular complex.

32. (withdrawn) The rigid solid support of claim 31 wherein the first and second cytokines are identical.

33. (withdrawn) The rigid solid support of claim 31 wherein the first and second cytokines are different.

34. (withdrawn) The rigid solid support of claim 30 wherein the T cell growth factor is the second molecular complex.

35. (withdrawn) The rigid solid support of claim 34 wherein the first and second cytokines are identical.

36. (withdrawn) The rigid solid support of claim 34 wherein the first and second cytokines are different.

37. (currently amended) The rigid solid support of claim 1 4 wherein the at least one T cell affecting molecule is a regulatory T cell inducer molecule.

38. (currently amended) The rigid solid support of claim 37 wherein the at least one regulatory T cell inducer molecule is selected from the group consisting of TGFβ, IL-10, interferon-α, and IL-15.

39. (currently amended) The rigid solid support of claim 1 4 wherein the at least one T cell affecting molecule is an apoptosis-inducing molecule.

40. (currently amended) The rigid solid support of claim 39 wherein the apoptosis-inducing molecule is selected from the group consisting of a toxin, TNFα, and Fas ligand.

41. (currently amended) The rigid solid support of claim 1 4 which comprises at least two different T cell affecting molecules.

42-45. (canceled)

46. (currently amended) ~~A~~ An artificial particle, comprising:

(A) at least one T cell costimulatory molecule; and

(B) at least one MHC class I molecular complex comprising at least two fusion proteins, wherein a first fusion protein comprises a first MHC class I α chain and a first immunoglobulin heavy chain and wherein a second fusion protein comprises a second MHC class I α chain and a second immunoglobulin heavy chain, wherein the first and second immunoglobulin heavy chains associate to form the MHC class I molecular complex, wherein the MHC class I molecular complex comprises a first MHC class I peptide binding cleft and a second MHC class I peptide binding cleft.

47. (currently amended) The artificial particle of claim 46 wherein the at least one T cell costimulatory molecule is an antibody that specifically binds to CD28.

48. (currently amended) A preparation comprising a plurality of artificial particles, wherein artificial particles of the plurality comprise:

(A) at least one T cell lymphocyte affecting molecule selected from the group consisting of a T cell costimulatory molecule, an adhesion molecule, a T cell growth factor, a regulatory T cell inducer molecule, and an apoptosis-inducing molecule; and

(B) at least one molecular complex that, when bound to an antigen, engages a unique clonotypic lymphocyte receptor, wherein the at least one molecular complex is selected from the group consisting of:

(1) an MHC class I molecular complex comprising at least two fusion proteins, wherein a first fusion protein comprises a first MHC class I α chain and a first immunoglobulin heavy chain comprising a variable region and wherein a second fusion protein comprises a second MHC class I α chain and a second

immunoglobulin heavy chain, wherein the first and second immunoglobulin heavy chains associate to form the MHC class I molecular complex, wherein the MHC class I molecular complex comprises a first MHC class I peptide binding cleft and a second MHC class I peptide binding cleft; and

(2) an MHC class II molecular complex comprising at least four fusion proteins, wherein:

(a) two first fusion proteins comprise (i) an immunoglobulin heavy chain comprising a variable region and (ii) an extracellular domain of an MHC class IIβ chain; and

(b) two second fusion proteins comprise (i) an immunoglobulin light chain and (ii) an extracellular domain of an MHC class IIα chain,

wherein the two first and the two second fusion proteins associate to form the MHC class II molecular complex, wherein the extracellular domain of the MHC class IIβ chain of each first fusion protein and the extracellular domain of the MHC class IIα chain of each second fusion protein form an MHC class II peptide binding cleft.

49. (original) The preparation of claim 48 further comprising a pharmaceutically acceptable carrier.

50. (canceled)

51. (withdrawn) The preparation of claim 48 wherein the plurality of artificial particles comprises:

(A) at least one first artificial particle wherein the at least one antigen binding cleft of the first artificial particle is an MHC class I peptide binding cleft; and

(B) at least one second artificial particle wherein the at least one antigen binding cleft is an MHC class II peptide binding cleft.

52. (withdrawn) The preparation of claim 51 wherein an antigenic peptide is bound to the at least one peptide binding cleft of the first artificial particle.

53. (withdrawn) The preparation of claim 51 wherein a first antigenic peptide is bound to the at least one peptide binding cleft of the first artificial particle and a second antigenic peptide is bound to the at least one peptide binding cleft of the second artificial particle.

54. (withdrawn) The preparation of claim 53 wherein the first and second antigenic peptides are identical.

55. (withdrawn) The preparation of claim 53 wherein the first and second antigenic peptides are different.

56. (withdrawn) The preparation of claim 48 ~~50~~ wherein each antigen binding cleft of the antigen presenting complexes is an MHC class I peptide binding cleft.

57. (withdrawn) The preparation of claim 56 wherein antigenic peptides are bound to the MHC class I peptide binding clefts.

58. (withdrawn) The preparation of claim 57 wherein the antigenic peptides are identical.

59. (withdrawn) The preparation of claim 57 wherein the antigenic peptides are different.

60. (currently amended) The preparation of claim 48 ~~50~~ wherein each antigen binding cleft of the antigen presenting complexes is an MHC class II peptide binding cleft.

61. (original) The preparation of claim 60 wherein antigenic peptides are bound to the MHC class II peptide binding clefts.

62. (original) The preparation of claim 61 wherein the antigenic peptides are identical.

63. (withdrawn) The preparation of claim 61 wherein the antigenic peptides are different.

64. (currently amended) The preparation of claim 48 ~~50~~ wherein the antigen presenting complex is the ~~an~~ MHC class I molecular complex ~~comprising at least two fusion proteins, wherein a first fusion protein comprises a first MHC class I α chain and a first immunoglobulin heavy chain and wherein a second fusion protein comprises a second MHC class I α chain and a second immunoglobulin heavy chain, wherein the first and second immunoglobulin heavy chains associate to form the MHC class I molecular complex, wherein the MHC class I molecular complex comprises a first MHC class I peptide binding cleft and a second MHC class I peptide binding cleft~~.

65. (currently amended) The preparation of claim 48 ~~50~~ wherein the antigen presenting complex is the ~~an~~ MHC class II molecular complex ~~comprising at least four fusion proteins, wherein:~~

~~(a) two first fusion proteins comprise (i) an immunoglobulin heavy chain and (ii) an extracellular domain of an MHC class IIβ chain; and~~

~~(b) two second fusion proteins comprise (i) an immunoglobulin light chain and (ii) an extracellular domain of an MHC class IIα chain;~~

~~wherein the two first and the two second fusion proteins associate to form the MHC class II molecular complex, wherein the extracellular domain of the MHC class IIβ chain of each first fusion protein and the extracellular domain of the MHC class IIα chain of each second fusion protein form an MHC class II peptide binding cleft~~.

66-70. (canceled)

71. (withdrawn) A method of inducing the formation of antigen-specific T cells, comprising the step of:

contacting an isolated preparation comprising a plurality of precursor T cells with at least one first rigid solid support of claim 1 ~~4~~, wherein antigens are bound to the antigenic binding clefts, thereby inducing members of the plurality of precursor T cells to form a first cell population comprising antigen-specific T cells that recognize the antigen, wherein the number or percentage of antigen-specific T cells in the first cell population is greater than the number or percentage of antigen-specific T cells that are formed if precursor T cells are incubated with a rigid solid support that comprises an antibody that specifically binds to CD3 but does not comprise an antigen presenting complex.

72. (withdrawn) The method of claim 71 wherein the antigen-specific T cells are cytotoxic T cells.

73. (withdrawn) The method of claim 71 wherein the antigen-specific T cells are helper T cells.

74. (withdrawn) The method of claim 71 wherein the antigen-specific T cells are regulatory T cells.

75. (withdrawn) The method of claim 71 further comprising the step of separating the antigen-specific T cells from the first cell population.

76. (withdrawn) The method of claim 71 further comprising the step of incubating the first cell population with at least one second rigid solid support of claim 1 ~~4~~, wherein antigens are bound to the antigen binding clefts ~~of the particles~~, wherein the step of incubating is carried out for a period of time sufficient to form a second cell population comprising an increased

number or percentage of antigen-specific T cells relative to the number or percentage of antigen-specific T cells in the first cell population.

77. (withdrawn) The method of claim 71 wherein the antigens are identical.

78. (withdrawn) The method of claim 71 wherein the antigens are different.

79. (withdrawn) The method of claim 71 wherein the isolated preparation is contacted with at least two first rigid solid supports, wherein different antigens are bound to the antigen binding clefts of the molecular complexes of each of the first solid supports.

80. (withdrawn) A method of increasing the number or percentage of antigen-specific T cells in a population of cells, comprising the step of:

incubating a first cell population comprising antigen-specific T cells with at least one first rigid solid support of claim 1 **4**, wherein antigens are bound to the antigen binding clefts, wherein the step of incubating is carried out for a period of time sufficient to form a second cell population comprising an increased number or percentage of antigen-specific T cells relative to the number or percentage of antigen-specific T cells in the first cell population.

81. (withdrawn) The method of claim 80 wherein the first cell population is a homogeneous cell population.

82. (withdrawn) The method of claim 71 further comprising the step of administering the antigen-specific T cells to a patient.

83. (withdrawn) The method of claim 82 wherein the patient has cancer, an autoimmune disease, an infectious disease, or is immunosuppressed.

84. (withdrawn) The method of claim 82 wherein the precursor T cells are obtained from the patient.

85. (withdrawn) The method of claim 82 wherein the precursor T cells are obtained from a donor who is not the patient.

86. (withdrawn) The method of claim 82 wherein the antigen-specific T cells are administered by a route of administration selected from the group consisting of intravenous administration, intra-arterial administration, subcutaneous administration, intradermal administration, intralymphatic administration, and intra-tumoral administration.

87. (withdrawn) The method of claim 80 further comprising the step of administering the antigen-specific T cells of the second population to the patient.

88-142. (canceled)

143. (new) The rigid solid support of claim 3 wherein the artificial particle is a bead.

144. (new) The artificial particle of claim 46 which is a bead.

145. (new) The preparation of claim 48 wherein the artificial particles are beads.